Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-16.   (Canceled).

17.   (New) A base station using a code associated with a preamble of a random access channel (RACH) transmission, the subscriber unit comprising:

    means for selecting one out of sixteen preamble signatures;
    means for producing a code based on the preamble sequence; and
    means for phase rotating the produced code to produce a preamble code.

18.   (New) The base station of claim 17 wherein the produced code is used for correlation with a received sequence.

19.   (New) The base station unit of claim 17 wherein the produced code is used to resolve Doppler for a received RACH transmission.

20.   (New) A base station using a code associated with a preamble of random access channel (RACH) transmission, the base station configured to produce the preamble code derived by selecting one out of sixteen preamble signatures; the base station configured to produce a code based on the preamble sequence; and the base station configured to phase rotate the produced code to produce a preamble code.

21.   (New) The base station of claim 20 wherein the produced code is used for correlation with a received sequence.

22.   (New) The base station of claim 20 wherein the produced code is used to resolve Doppler for a received RACH transmission.

Amendments to the Specification:

Please replace paragraph [0060] with the following amended paragraph:

[0060] The receiver 29 includes a demodulator 57a, 57b which downconverts the received revision of transmitted broadband signal 55 at antenna 56 into an intermediate carrier frequency 59a, 59b. A second down conversion at the mixers 58a, 58b , not pictured, reduces the signal to baseband. The QPSK signal is then filtered by the filters 61 and mixed at mixers 62a, 62b with the locally generated complex pn sequence 43a, 43b which matches the conjugate of the transmitted complex code. Only the original waveforms which were spread by the same code at the transmitter 27 will be effectively despread. All other received signals will appear as noise to the receiver 29. The data 65a, 65b is then passed to a signal processor 67 where FEC decoding is performed on the convolutionally encoded data.